



# Forest Health Protection Pacific Southwest Region



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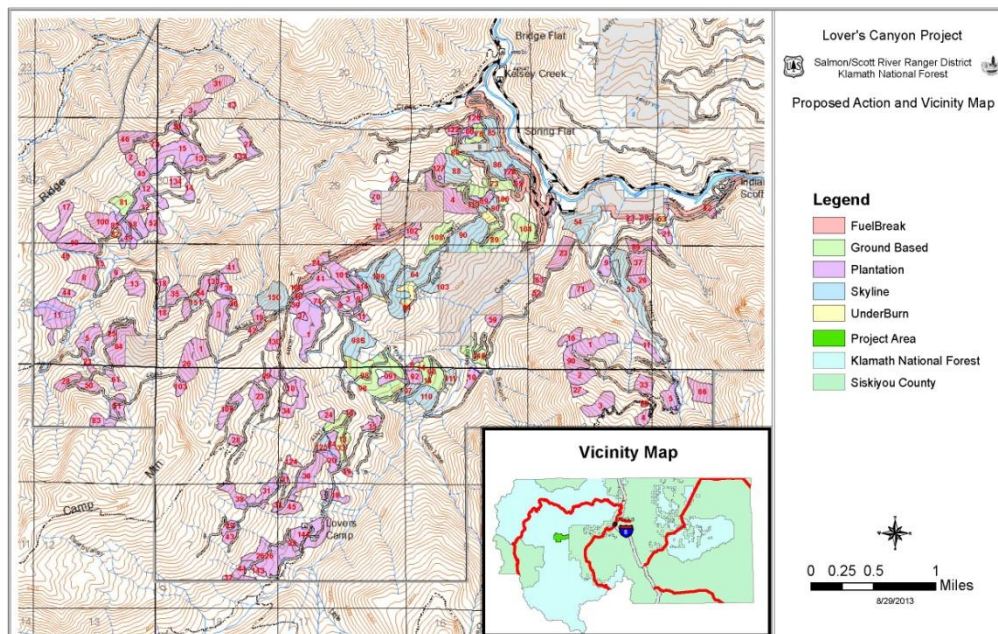
**To: Patricia Grantham, Forest Supervisor, Klamath National Forest**

**Subject: Report following initial site visit to Lovers Canyon Project to determine suitability for WBBi funding (FHP Report No. N13-07)**

At the request of Travis Coughlin, Forester (Klamath NF), a site visit was made to the Lovers Canyon Project on June 19, 2013. The objectives were to assess the current stand conditions, evaluate the project for potential funding through the Forest Health Protection (FHP) Western Bark Beetle Initiative. Travis Coughlin, Austin Nevarez, Jennie Bennett, Meghan Wiles and Roger Siemers (Klamath NF) Cynthia Snyder and Pete Angwin (FHP) were present.

## **Background**

The Lovers Canyon Project involves thinning on approximately about 2,700 acres within the 11,810 acre project boundary (Figure 1). The project area is located 15 miles west of Fort Jones in the Boulder, Canyon and Kelsey Creeks Watersheds with stands near Lovers Camp and other widely-used PCT trailheads (T44N, R12W, sec. 25 and 36; T44N, R11W, sec. 19, 21 and 25-35; T43N, R12W., sec. 1; T43N, R11W, sec. 2-8, all Mt. Diablo Meridian).



**Figure 1. Public scoping map of the Lovers Canyon Project area.**

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The project is being conducted under the authority of the Healthy Forests Restoration Act (HFRA) section 102(a). This project meets two of the five criteria in that section: projects taking place within the wildland urban interface, and projects containing threatened and endangered species habitat. The project area contains 6,371 acres of wildland urban interface, and the entire project area is within designated Critical Habitat for the northern spotted owl (NSO). The Purpose and Need responds to concerns of stakeholders including the Lower Scott River Fire Safe Council and members of the general public regarding fire hazard/risk, high fuel loading and general poor forest health within the project planning area.

The project uses the Canyon Watershed Analysis which describes a resilient landscape is a diverse one, where no single element being removed from the ecosystem will affect the entire system. The measure of diversity on a landscape level used in the analysis is the stand structural class expressed as a percentage of the landscape it covers as determined using Pacific Southwest Region's remote sensing data. The data presented (Table 1) show that much of the project area is in the small (11-24.9 inches diameter at breast height, dbh) conifer structural class. Thus, change is needed to develop a more diverse and resilient landscape.

**Table 1. Desired condition range and existing condition of the structural classes within the project area.**

Structural Class	Desired Condition Range*	Existing Condition
Seedling/Sapling (0-5.9" dbh)	5 to 15%	6%
Poles (6"-10.9" dbh)	10 to 20%	7%
Small Conifer (11"-24.9" dbh)	15 to 35%	46%
Medium/Large Conifer (>25" dbh)	40 to 60%	38%
<i>*As defined in the Canyon WA (page 48).</i>		

The purpose and need for action is to accelerate the development of the existing “small” conifer stands, thus moving them into the “medium/large” size classes to achieve the range of desired conditions for the landscape. These ranges are consistent with landscape-scale processes to provide a variety of habitat values, opportunities for human uses and sustainable and predictable levels of resource outputs outlined in the Forest Plan.

The general prescription will be a variable density thinning from below, focusing on stands in the small conifer structural class (11 – 24.9 inches dbh). Of the 2,400 acres selected for potential treatment, more than half are existing plantations (about 1,700 acres). The remaining area is made up of previously managed natural stands. At this time, the Forest Service is proposing to accomplish these treatments through hand and mechanical thinning with ground-based and skyline logging systems, with a combination of hand piling, lop and scattering, or biomass harvesting proposed in smaller plantations. Activity fuels within harvest units will be hand piled, landing piled, and made available for biomass or permitted public fuelwood collection prior to burning.

There would be three types of fuel breaks created within the project area: one ridge line fuel break of about 40 acres, a fuel break above private property in the project area of about 11 acres, and roadside fuels reduction for escape routes on private property of about 140 acres. Fuel breaks would vary in width depending on the site condition. The ridgeline fuel break would be up to 200 feet either side of a road system on the ridge line (NFS Road 44N55). Private property fuel breaks would be up to 200 feet upslope of private property. The roadside fuel breaks would be up to 200 feet either side of identified NFS and county roads. The fuel break treatments would involve cutting and piling of ladder fuels, including brush, hardwoods, and conifer trees less than 10 inches dbh.

## **Observations**

✎ The first stop was to Stand 526-337 (N 41° 36.750', W 123° 06.982', elevation 3,168 ft). This was a ponderosa pine (*Pinus ponderosae*) and Douglas-fir (*Pseudotsuga menziesii*) plantation. The understory was primarily made up of ponderosa pine, Douglas-fir, white fir (*Abies concolor*) and hardwoods (Figure 2).

The stand was very dense (SDI 435) with the mean diameter of 12.6 inches. This puts the stand at high risk of bark beetle-caused mortality from western pine beetle and mountain pine beetle. Both mountain pine beetle and western pine beetle were found to have caused mortality in a pocket of about 10 trees. With a population already present and the extremely high density, this stand is a high risk for continued mortality.



**Figure 2. Dense ponderosa pine and Douglas-fir stand with hardwoods in the foreground.**

✎ We next stopped at Stand 526-30 (N 41° 36.019', W 123° 08.687', elevation 4,536 ft). This stand was planted with 95% ponderosa pine and 5% incense cedar (Figure 3) with ingrowth of Douglas-fir and white fir. Current mean diameter of the plantation trees is 17.4 inches. Western pine beetle caused mortality in a pocket of 6 trees (Figure 4).





**Figure 3. Ponderosa pine and incense cedar plantation with current SDI of 309.**



**Figure 4. Western pine beetle galleries under the bark of ponderosa pine, beetles still present.**

✍️ We next stopped at Stand 526-98 (N 41° 36.826', W 123° 07.874', elevation 3,572 ft). This plantation was originally 78% ponderosa pine, 17% sugar pine (*P. lambertiana*) and 5% Douglas-fir (Figure 5). The current SDI is 276 and QMD is 15.7.



**Figure 5. Mixed conifer plantation.**

✍️ We next stopped at Stand 526-41 (N 41° 37.320', W 123° 08.311', elevation 4,581ft). This was originally planted in 1961 to 100% ponderosa pine (Figure 6). It was thinned in 1982 and has since been marked for dwarf mistletoe reduction; DMR of 4-5 not uncommon throughout the stand but brooming is not evident. The current SDI is 395 and QMD is 13.1. The marked thinning will not eradicate the dwarf mistletoe, but will help by removing the worst. The road will provide a barrier to the next stands. No evidence of bark beetles was found but SDI suggests a high risk of imminent mortality if thinning does not occur soon.



**Figure 6. Very dense ponderosa pine plantation marked for reduction of dwarf mistletoe infection.**

### **Discussion**

The Lovers Canyon Project fits well with Western Bark Beetle Initiative guidelines for opportunity to reduce risk of bark beetle-caused mortality. The treatment units lie primarily in lands covered by the Lower Scott River Community Wildfire Protection Plan, the entire project area is within designated Critical Habitat for the northern spotted owl, the project area encompasses several high value recreation areas serving as access for the Pacific Crest National Scenic Trail, and the current stand composition and density of most of the units puts it at high risk of bark beetle-caused mortality.

If you have any questions regarding this report and/or need additional information, please contact Cynthia Snyder at 530-226-2437 or Pete Angwin at 530-226-2436.  
/s/ Cynthia Snyder

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